

5 **Claims:**

10 1. A method for separating a slip sheet from a plate comprising:

15 directing gas at the plate interface with the slip sheet to create a layer of gas between the plate and the slip sheet; and

20 directing gas at the slip sheet to blow the slip sheet into a discarded slip sheet area.

25 2. A slip sheet removal system according to claim 1 wherein the slip sheet is stored in a discarded slip sheet holding area.

30 3. A slip sheet removal system according to claim 1 wherein the gas directed at the plate is supplied by nozzles.

35 4. A slip sheet removal system according to claim 1 wherein the gas is air.

40 5. A slip sheet removal system according to claim 1 wherein the gas is at a pressure suitable for removing slip sheets and injecting air between slip sheets and plates.

45 6. A slip sheet removal system according to claim 1 wherein the gas is at 80 psi.

50 7. A slip sheet removal system according to claim 1 wherein the gas nozzles directing gas at the plate interface with the slip sheet comprise jet nozzles.

8. A slip sheet removal system according to claim 1 wherein
the gas nozzles directing gas at the slip sheet comprise jet
nozzles.

9. A slip sheet removal system according to claim 1 wherein
the gas is pulsed.

10 10. A slip sheet removal system according to claim 1
wherein the slip sheet is guided to the holding area by a slip
sheet chute.

15 11. A slip sheet removal system according to claim 10
wherein a top plate of the chute has an angled front edge which
further guides the slip sheet into the holding area.

12. An apparatus for separating a slip sheet from a plate
comprising:

20 at least one gas nozzle that directs gas at the plate
interface with the slip sheet to create a layer of gas between
the plate and the slip sheet and directs gas at the slip sheet
to blow the slip sheet into a discarded slip sheet area.

25 13. An apparatus according to claim 12 wherein one of the
at least one gas nozzles is a fan nozzle.

14. An apparatus according to claim 12 wherein one of the
at least one gas nozzles is a jet nozzle.

30 15. An apparatus for separating slip sheets from plates
comprising:

35 a cart comprising a plate handler area to hold at
least one stack of plates interleaved with slip sheets
and a discarded slip sheet holding bin;

5 a movable head comprising at least one vacuum cup to acquire plates one at a time from the cart; and at least one gas nozzle to create a layer of gas between the plates and the slip sheets and to blow the slip sheets into the holding bin.

10 16. An apparatus according to claim 15 wherein the plate handler area holds two stacks of plates interleaved with slip sheets.

15 17. An apparatus according to claim 15 wherein the front end corners of the plate handler area are squared to define an area for the plates to rest.

20 18. An apparatus according to claim 15 where the corners are squared and then taper outward to allow the slip sheets to pass through more easily.

25 19. An apparatus according to claim 15 wherein the plate handler area is separated from the discarded slip sheet holding bin by a plate which acts at the base of the handler area and the top of the holding bin.

30 20. An apparatus according to claim 15 wherein the bottom front end of the cart is slanted at an outward angle to prevent discarded slip sheets from piling up at the front of the cart.

35 21. An apparatus according to claim 15 wherein the back of the cart is removable to allow removal of discarded slip sheets.

22. An apparatus according to claim 15 wherein the head comprises a plurality of gas nozzles.

23. An apparatus according to claim 22 wherein at least one
of the gas nozzles is a fan nozzle.

5

24. An apparatus according to claim 22 wherein at least one
of the gas nozzles is a jet nozzle.

10 25. An apparatus according to claim 15 wherein the head
comprises a chute.

26. An apparatus according to claim 25 wherein the top of
the chute comprises a baffle.

15 27. An apparatus according to claim 26 wherein the baffle
has an angled front edge which further guides the slip sheet into
the holding area.

20 28. An apparatus for separating slip sheets from plates
comprising:

means for handling plates,
means for holding discarded slip sheets,
and means for directing slip sheets from a handling
area to the means for holding.

25

29. An apparatus according to claim 28 wherein plates are
handled in an area defined by two side panels and a bottom plate.

30 30. An apparatus according to claim 29 wherein front end
corners of the area are squared.

35 31. An apparatus according to claim 29 wherein front end
corners of the area are squared and then taper off in order for
the slip sheets to more easily pass through.

32. An apparatus according to claim 28 wherein the means
for handling plates and the means for holding discarded slip
5 sheets are contained in a cart.

33. An apparatus according to claim 28 wherein the means
for directing a slip sheet from the handling area to the holding
area comprise a chute.

10

34. An apparatus according to claim 33 wherein the chute
comprises a bottom plate, a top plate and two side panels.

35. An apparatus according to claim 34 wherein a front edge
15 of the top plate is slanted downward to direct slip sheets into
the means for holding and to prevent them from being caught on
the means for handling plates.

20

25

30

35